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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/757,175	01/09/2001	Pang-Chia Lu	10234-2	1308

7590 02/05/2003

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EXAMINER

CHANG, VICTOR S

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 02/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

09/757,175

Applicant(s)

LU ET AL.

Examiner

Victor S Chang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 December 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) 8-27 and 37 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 28-36 and 38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) ✓
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) ✓
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I in Paper No. 7 is acknowledged. The traversal is on the ground(s) that the search for Group II, claim 27, would not be an undue burden on the Examiner. This is not found to be persuasive because these inventions are clearly distinct and have acquired a separate status in the art as shown by their different classification.

The requirement is still deemed proper and is therefore made FINAL.

Additionally, Applicants' election of species 1, which read upon claims 1-7, 28-36 and 38 in Paper No. 7 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claim 2, 4-7, 28, 29 and 30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 recites the limitation "said matrix material" in line 4. There is no antecedent basis for this limitation in the claim.

In claim 2, line 1, the phrase "a stratum of voids" is vague and indefinite. It is not clear to the Examiner what "stratum" encompasses, or where the voids are located, i.e., presumably in the thermoplastic material that forms the core layer. Clarification is requested. Further, the Examiner suggests delete ",", at line 3.

Claims 1 and 28 are de facto duplicates of each other.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2, 5-6 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Swan et al. (US 4965123).

Swan's invention is directed to a multilayer, opaque, biaxially oriented polymeric film structure (Abstract). Swan teaches that the film comprises a thermoplastic polymer matrix core layer having a first surface and a second surface, within which is located a strata of voids; positioned at least substantially within a substantial number of said voids is at least one spherical void-initiating particle which is phase distinct and incompatible with said matrix material, the void space occupied by said particle being substantially less than the volume of said void, with one generally cross-sectional dimension of said particle at least approximating a corresponding cross-sectional dimension of said void; the population of said voids in said core being such as to cause a significant degree of

opacity (column 11, lines 53-65). Swan also teaches that the film comprises a void-free, thermoplastic skin layer adhering to said second surface of said core layer, said void-free skin layer which contains an opacifying or coloring agent (column 12, lines 10-18). Further, the core layer is fabricated from isotactic polypropylene, and the void-initiating particles of the core layer comprises polybutylene terephthalate (column 12, lines 24-25 and 28-30).

Claims lack novelty.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3, 4, 7, 29-36 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Swan et al. (US 4965123) in view of Liu et al. (US 4741950).

The teachings of Swan are again relied upon as set forth above.

For claims 3, 4 and 7, although Swan lacks specific teaching of incorporating TiO₂ in the core layer, it is noted that Liu's patent is directed to an opaque multilayer film based on substantially the same technology as taught by Swan (Example 1, column 6), and Liu teaches that the opacity of the film can be enhanced by the inclusion of opaquing pigment, e.g., titanium dioxide, dispersed throughout the core. A particularly preferred proportion of pigment in the core layer can be from about 1 to about 3% by weight thereof (column 2, lines 64-68). As such, it would have been obvious to one of

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ordinary skill in the art to modify Swan's core layer and incorporating a suitable amount of TiO_2 , motivated by the desire to enhance the opacity of the film.

For claim 29, it is believed that substituting isotactic polypropylene with an alternative polyolefin such as high density polyethylene is within the skill of the art. Note also as evidence of the state of the art Ambroise (US 5500265) which discloses an opaque multilayer film based on substantially the same technology as taught by Swan, and teaches that the core layer may instead be high density polyethylene (column 3, lines 4-5).

For claim 30, Swan teaches that the void-initiating particles of said skin layer comprise calcium carbonate (column 12, lines 31-33), and it is believed that calcium carbonate can be equally used in the core layer as well. Note also as evidence of the state of the art Keller (US 5091236) which discloses an opaque multilayer film based on substantially the same technology as taught by Swan, and teaches that the void-initiating particles of the core layer can be any suitable organic or inorganic material which is incompatible with the core material at the temperature of biaxial orientation such as polybutylene terephthalate, nylon, solid or hollow preformed glass spheres, metal beads or spheres, ceramic spheres, calcium carbonate, etc. (column 6, lines 3-10).

For claims 31-35 and 38, although Swan does not expressly teach the transition or intermediate layer(s) in a multilayer film, it is believed that incorporating a transition layer such as tie layer is common and well known to one skilled in the art, motivated by the desire to improve the adhesion between the layers.

For claim 36, although Swan does not expressly teach the opacity of the skin layer, it is believed that a suitable opacity is either inherently disclosed or an obvious optimization to one skilled in the art.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor S Chang whose telephone number is 703-605-4296. The examiner can normally be reached on 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel H Morris can be reached on 703-308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

VSC
January 30, 2003

DANIEL ZIRKER
PRIMARY EXAMINER
GROUP 1900-
1700

